Title (en)

High-tensile, cold formable steel and flat steel product composed of such steel

Title (de)

Höherfester, kaltumformbarer Stahl und aus einem solchen Stahl bestehendes Stahlflachprodukt

Title (fr)

Acier à résistance élevée pouvant être déformé à froid et produit plat en acier constitué d'un tel acier

Publication

EP 2402472 B1 20140108 (DE)

Application

EP 10168353 A 20100702

Priority

EP 10168353 A 20100702

Abstract (en)

[origin: EP2402472A1] High-strength cold- molded steel comprises carbon (0.1-1 wt.%); manganese (10-25 wt.%); silicon (up to 0.5 wt.%); aluminum (0.3-2 wt.%); chromium (1.5-3.5 wt.%); sulfur (less than 0.03 wt.%); phosphorus (less than 0.08 wt.%); nitrogen (less than 0.1 wt.%); molybdenum (less than 2 wt.%); boron (less than 0.01 wt.%); nickel (less than 8 wt.%); copper (less than 5 wt.%); calcium (up to 0.015 wt.%); vanadium (0.01-0.5 wt.%) or niobium (0.01-0.5 wt.%); optionally titanium (0.01-0.5 wt.%); and iron and unavoidable pollutants (balance). An independent claim is included for flat steel products produced from the steel.

IPC 8 full level

C21D 7/02 (2006.01); **C21D 9/50** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01)

CPC (source: EP US)

B32B 15/012 (2013.01 - US); **B32B 15/013** (2013.01 - US); **C21D 7/02** (2013.01 - EP US); **C21D 9/50** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/20** (2013.01 - US); **C22C 38/22** (2013.01 - US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - US); **C22C 38/32** (2013.01 - US); **C22C 38/38** (2013.01 - US); **C22C 38/42** (2013.01 - US); **C22C 38/44** (2013.01 - US); **C22C 38/48** (2013.01 - US); **C22C 38/50** (2013.01 - US); **C22C 38/54** (2013.01 - US); **C22C 38/58** (2013.01 - US); C21D 2211/001 (2013.01 - EP US); Y10T 428/12757 (2015.01 - EP US); Y10T 428/12799 (2015.01 - EP US)

Cited by

DE102013012118A1; WO2017055107A1; EP3255170A1; AU2018203405B2; US10144986B2; WO2018188766A1; WO2017071209A1; WO2015007265A3; WO2015007265A2; US10378681B2; WO2017054867A1

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DOCDB simple family (publication)

EP 2402472 A1 20120104; **EP 2402472 B1 20140108**; **EP 2402472 B2 20171115**; BR 112012033174 A2 20161129; CA 2802129 A1 20120105; CA 2802129 C 20151110; CN 102985578 A 20130320; CN 102985578 B 20160622; ES 2455222 T3 20140415; ES 2455222 T5 20180305; JP 2013534973 A 20130909; JP 5698353 B2 20150408; KR 101604408 B1 20160317; KR 20130025964 A 20130312; MX 2012014949 A 20130226; MX 346631 B 20170327; RU 2524027 C1 20140727; US 2013209831 A1 20130815; WO 2012001163 A2 20120105; WO 2012001163 A3 20121115

DOCDB simple family (application)

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